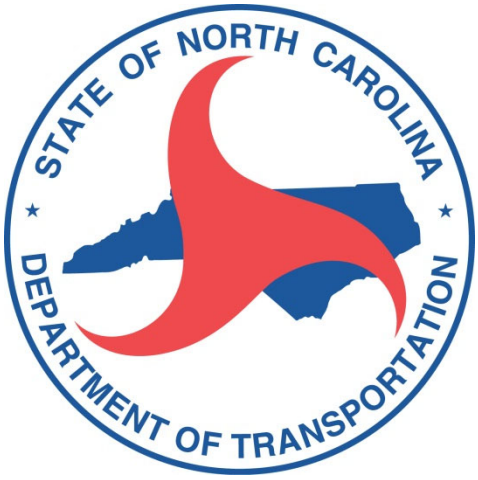
NC Department of Transportation

Agency Utility Management Plan

Fiscal Years 2019-2021



2020 Agency Utility Management Plan

North Carolina Department of Transportation

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Executive Summary

This NCDOT Agency Utility Management Plan (AUMP) has been developed in accordance with N.C. Gen. Stat. 143-64/12(a), and has been updated to support the achievement of goals outlined in Sections 1 and 8 of Executive Order 80 - NORTH CAROLINA'S COMMITMENT TO ADDRESS CLIMATE CHANGE AND TRANSITION TO A CLEAN ENERGY ECONOMY. The intent of this plan is to support environmental stewardship and reduce the impact of utility usage in NCDOT-owned buildings upon the climate through the responsible use of utilities. This Plan reports FY 2019-2020 utility usage and trends, and summarizes NCDOT strategy and programs supporting legislative and Executive Order 80 goals for fiscal years 2019 - 2021.

This report is updated biennially, and outlines ongoing energy savings programs that will reduce NCDOT energy consumption per square foot in DOT buildings by 40% from fiscal year 2003-2004 levels; support specified goals to preserve and enhance the State's natural resources, and reduce the economic impact of operating a vast transportation network. It will also help the Department to compete for additional funding available through the DEQ / State Energy Office and the Federal Government to fund energy saving programs. Energy and cost saving results to-date from current programs are summarized in the Energy and Usage Data section beginning on page 7.

Since 2003, NCDOT has implemented and tracked energy savings programs that reduce the financial burden and environmental impact of utility usage. At the conclusion of Fiscal Year 2020, DOT and NC State Port Authority (NCSPA) energy savings programs have resulted in an **energy cost avoidance of $28,338,381** and **a water cost avoidance of $13,413,637 totaling $41,752,018** over the last 16 years. By the end of FY 20, those cost savings have **reduced energy and water costs per square foot by 31% and 8% in DOT facilities respectively** as measured from the baseline fiscal year of 2003-2004. NCSPA saw a **22%** increase in energy usage, but a reduction in water consumption by **3%** per square foot during that same period. **Combined DOT and NCSPA energy and water consumption per square foot has decreased by 26% and 7% respectively since fiscal 2003-04**.

Due to the type of buildings used by NCSPA, the success of efforts to reduce energy costs in buildings is not evident by measuring energy use per square foot. A more informative metric of energy usage in NCSPA buildings is energy cost per ton of cargo transported through port terminals. In FY 20 there was a **31% increase in energy usage of per ton of cargo and a 4% increase in water usage by per ton** compared to usage during the baseline fiscal year of 2003-04.

At the conclusion of fiscal year 20, NCDOT (DOT and NCSPA) employees occupied at total of 2,382 buildings, totaling 9,376,748 square feet, with building utility costs totaling $10,771,348.

FY 20 - 22 strategies, programs, roles and deadlines are summarized in Appendix A on page 13, and energy and cost reductions achieved through FY 20 are illustrated in the following tables and graphs.

Table 1 – Total Energy Usage for DOT and NCSPA during FY 20

Agency	Building Square Fee	Total Building Utility Expense
DOT	6,552,374	$9,184,593
NCSPA	2,824,363	$1,586,755

Figure 1 – Total Avoided Utility Cost for DOT and NCSPA combined

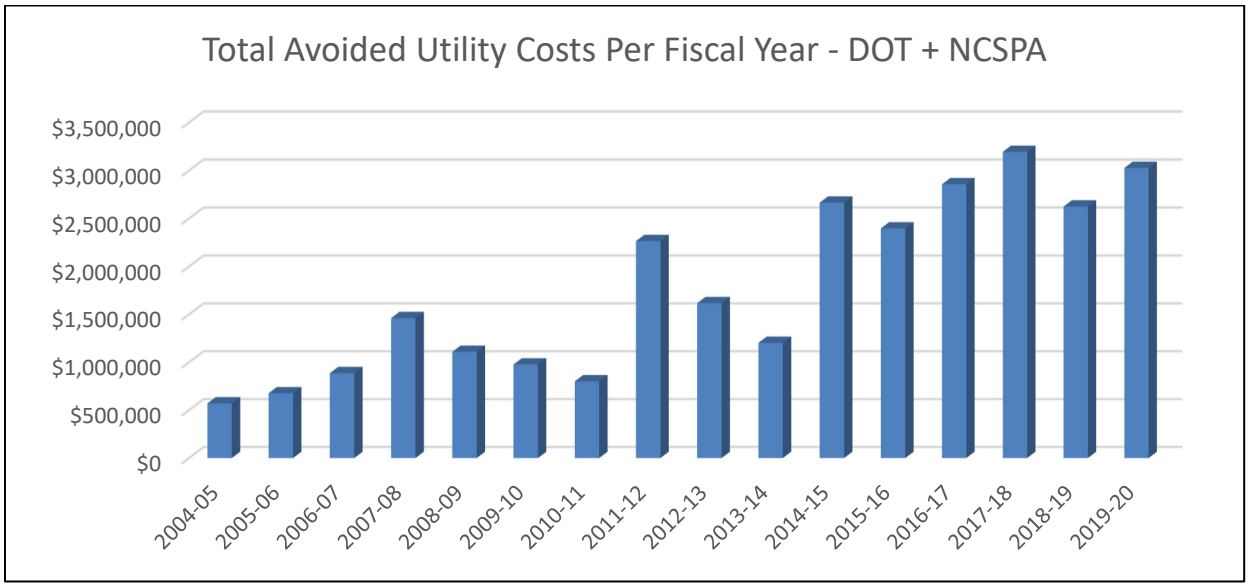


Figure 2 – % Change in Energy Usage for DOT

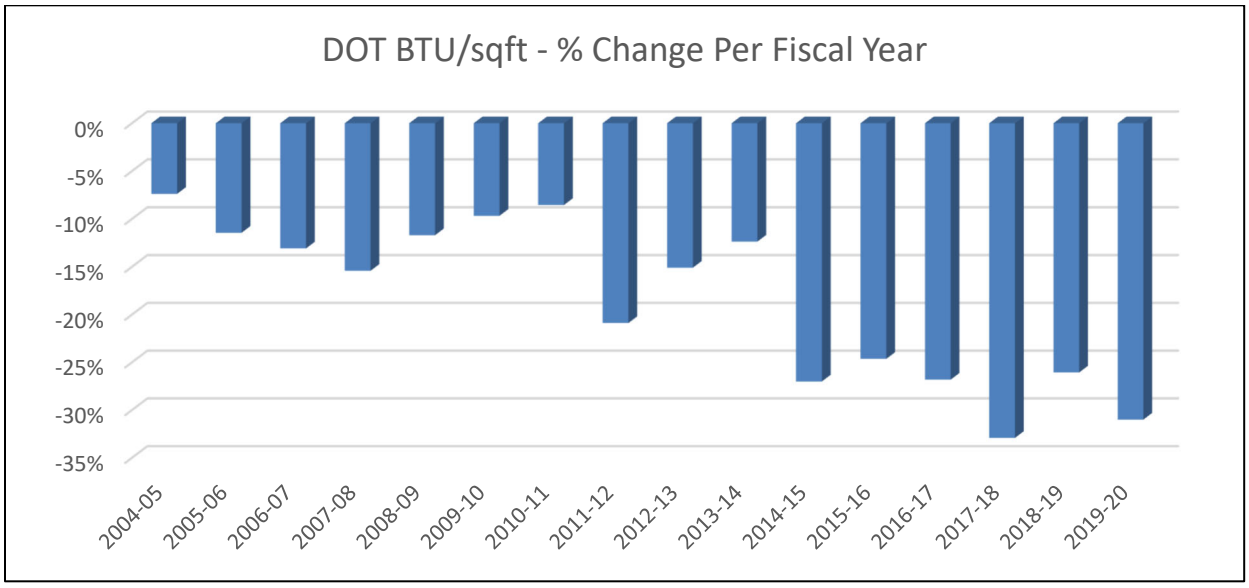


Figure 3 – % Change in Energy Usage for NCSPA

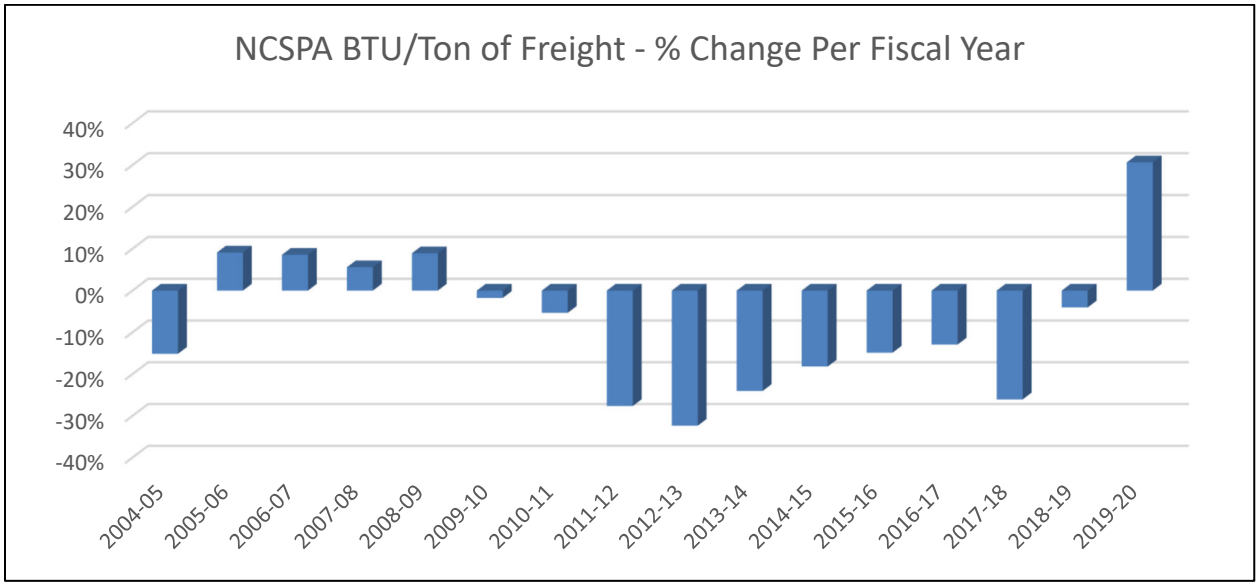
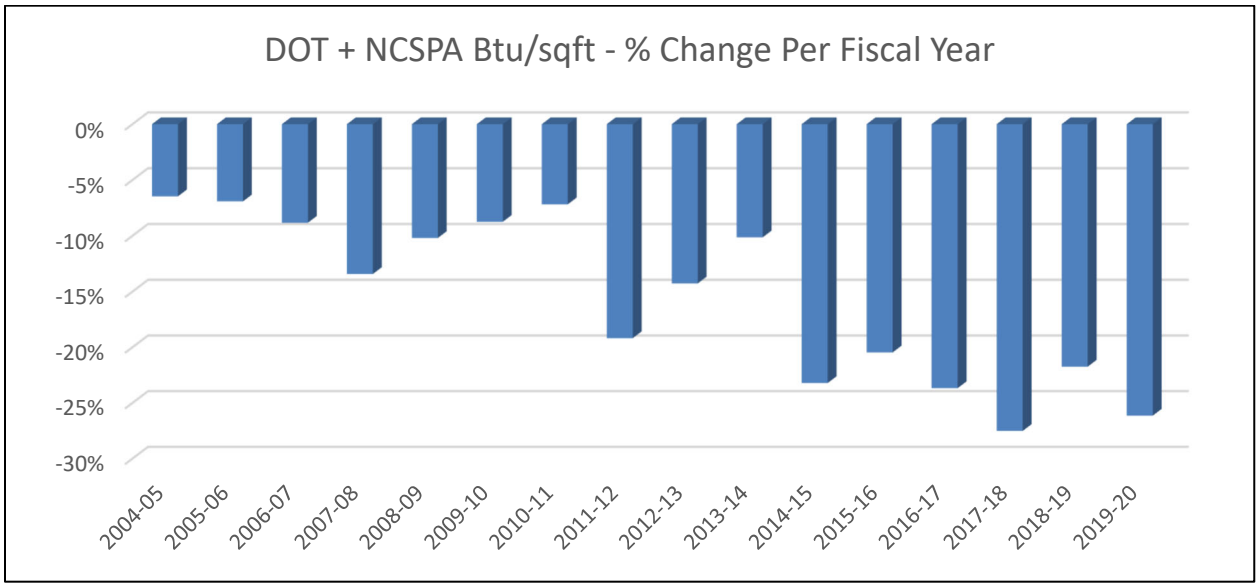


Figure 4 – % Change in Energy Usage for DOT + NCSPA



The following is a summary of the legislative and executive basis for this report, NCDOT energy reduction programs with additional data and tables illustrating results to-date.

Basis for NCDOT Agency Utility Management Plan

The Agency Utility Management Plan (AUMP) for NCDOT was developed in accordance with General Statute 143-64.10-12, *Energy Conservation in Public Facilities*, which mandates a comprehensive energy management program for State government, and Section 8 of Executive Order 80 (EO-80), NORTH CAROLINA'S COMMITMENT TO ADDRESS CLIMATE CHANGE AND TRANSITION TO A CLEAN ENERGY ECONOMY. This AUMP also meets the objectives of the State Utility Savings Initiative as managed by DEQ.

NCDOT Energy Conservation Programs

The primary NCDOT programs to achieve Executive Order 80 and legislative energy conservation goals are:

- Guaranteed Energy Savings Contract (GESC)
    - Use GESC as approved for state buildings or utility systems under General Statute 143-64.17, as a vehicle to fund and implement energy-related improvements.

    - *Building GESC*
        - Installed Energy Conservation Measures (ECMs) in 6 buildings in Raleigh
        - Installed more energy efficient HVAC system, lighting, windows and water fixtures.
        - Installed a building automation system to improve energy savings and monitor energy usage.
            - This system can be expanded to monitor and control HVAC systems in other DOT facilities.
        - Guaranteed cost savings over 15 years: **$8,897,860**
        - Status: Ongoing – in energy savings period

    - *Roadway Lighting GESC*
        - Upgrading roadway light fixtures on state-owned roads and in NCDOT buildings state-wide to LED-based fixtures.
        - Upgraded **10,689 roadway light fixtures** to LED-based fixtures.
        - Upgraded **14,981 interior and exterior light fixtures** in **805 DOT buildings** to LED-based fixtures.
        - Installed lighting control system to monitoring energy usage and support maintenance of fixtures.
        - Cost of installation and maintenance over 15 years to be paid from energy and operational savings.
        - Guaranteed cost savings over 15 years: **$51,295,813**
        - As of 11/11/2018 this is the only roadway lighting project in the US where project savings are used to:
            - Upgrade all state-owned roadway lighting
            - Install a lighting control system

        - Maintain & repair installed roadway lighting systems
    - Status: Ongoing -in energy savings period.

- Energy Efficiency Incentives
    - Partnering with utility providers to utilize energy efficiency incentive programs to reduce the cost of NCDOT projects - both vertical and horizontal.
    - Utilities provide a rebate for the installation of approved energy efficient hardware as well as funding approved measures / projects that will save energy.
    - Projected energy incentives from utility companies to reduce the cost of the *Roadway Lighting GESC* project by over **$1,500,000**.
    - Incentives totaling **$338,000** were received by NCDOT for the *Building GESC* project.
    - Status: Ongoing

- Analysis of Utility Accounts and Billing
    - Measuring and analyzing utility bills to identify opportunities to reduce cost and provide data in support of new and ongoing projects.
    - Investigating the use of Capturis and other utility data tracking systems as well using modified energy usage and costs reports using data from AP database.
    - As of 02/15/2020, NCDOT pays the cost of ~ 15,025 (electricity, water, gas, fuel oil, etc.) accounts.
    - Verify billing using appropriate rates.
    - Consolidate accounts to take advantage of lower rates.
    - Identifying excessive energy usage to identify and take corrective action.
    - Status: Ongoing.

- Building Energy Efficiency Design Standards
    - Ensure compliance with 2012 NC State Energy Code: Energy Conservation Code / NCGS 143-135.35, Article 8C so that new and renovated building designs are energy efficient.
    - Implement additional energy efficiency / sustainability design standards and other best practices for new and renovated buildings.
    - Status: Ongoing.

- Energy Audits
    - Perform energy audits of facilities to identify opportunities for energy and water conservation, and perform cost/benefit analysis for the proposed measures.
    - Plan and implement appropriate energy conservation projects funding permitting.
    - Status: Ongoing.

- NC Workspace Standards
    - Implementing latest State Property Office workspace standards in new and renovated buildings.
    - Reduces space / buildings needed in new and renovated buildings, energy consumption, and costs.
    - Status: Ongoing

- Training
    - Train facility managers / staff to perform preventative maintenance of existing and new systems to ensure energy and water conservation objectives are met and maintained.
    - Ensure adequate training is included in the scope of work for building projects.
    - Status: Ongoing

- Partner with Other Agencies on Energy Savings Programs
    - Work with the Department of Environment Quality (DEQ) / State Energy Office (SEO), and other agencies to participate in existing or planned energy savings programs - particularly those funded / sponsored by those agencies.
    - Energy audits paid with funding from other agencies.
        - Usually coordinated by DEQ / SEO
    - Status: Ongoing

- Education
    - Educate / inform / engage NCDOT employees regarding state-wide energy conservation project and best practices through meeting presentations, emails, Intranet web sites, etc.
    - Status: Ongoing

Energy and Utility Usage Data

The following tables and graphs list and illustrate utility usage and costs in NCDOT owned facilities from the baseline year of FY 2003-04 to-date as well as progress toward achieving energy conservation and other goals specified in EO-80 and legislation.

Figure 5 – DOT Utility Costs for FY 2019-20

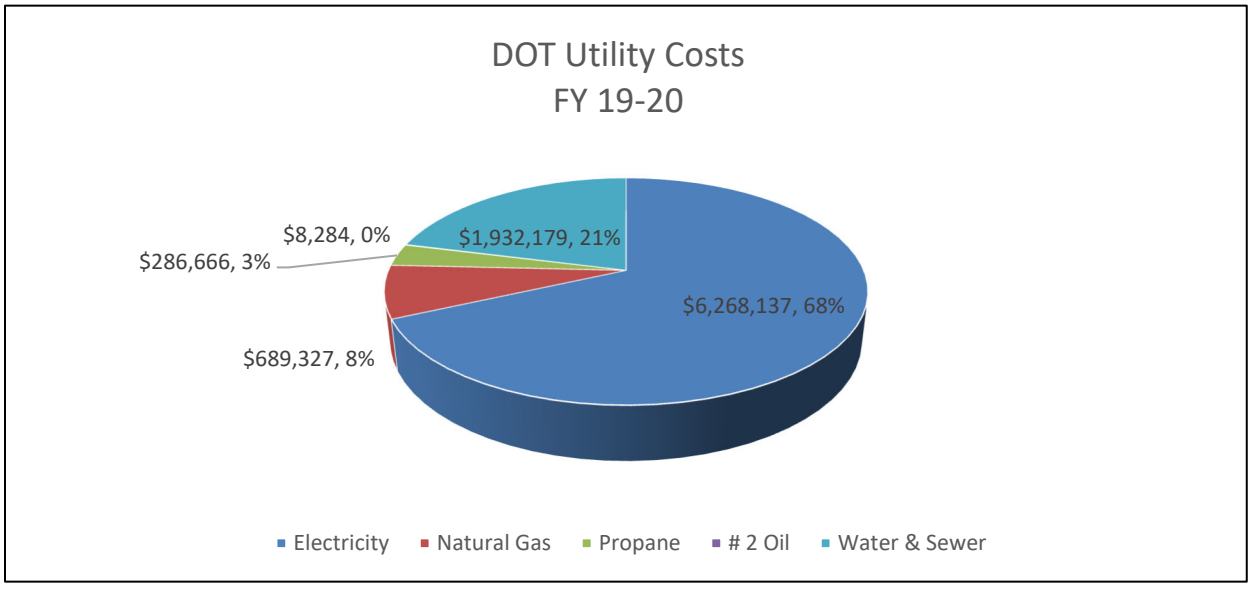


Figure 6 – DOT Total Utility Costs Per Year

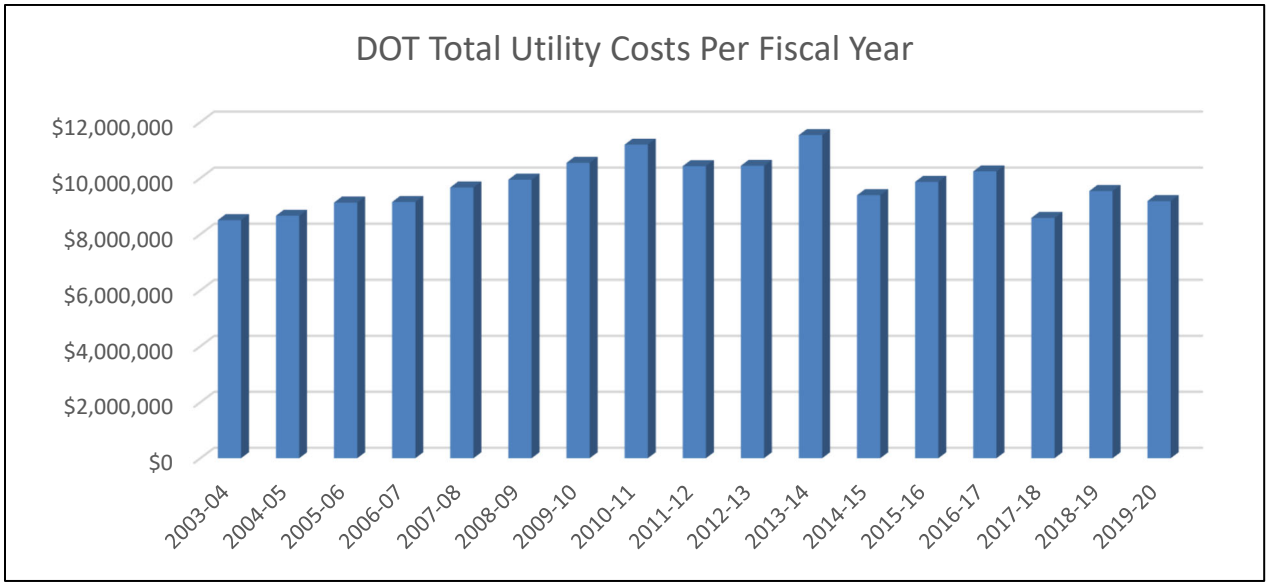


Figure 7 – NCSPA Utility Costs for FY 2019-20

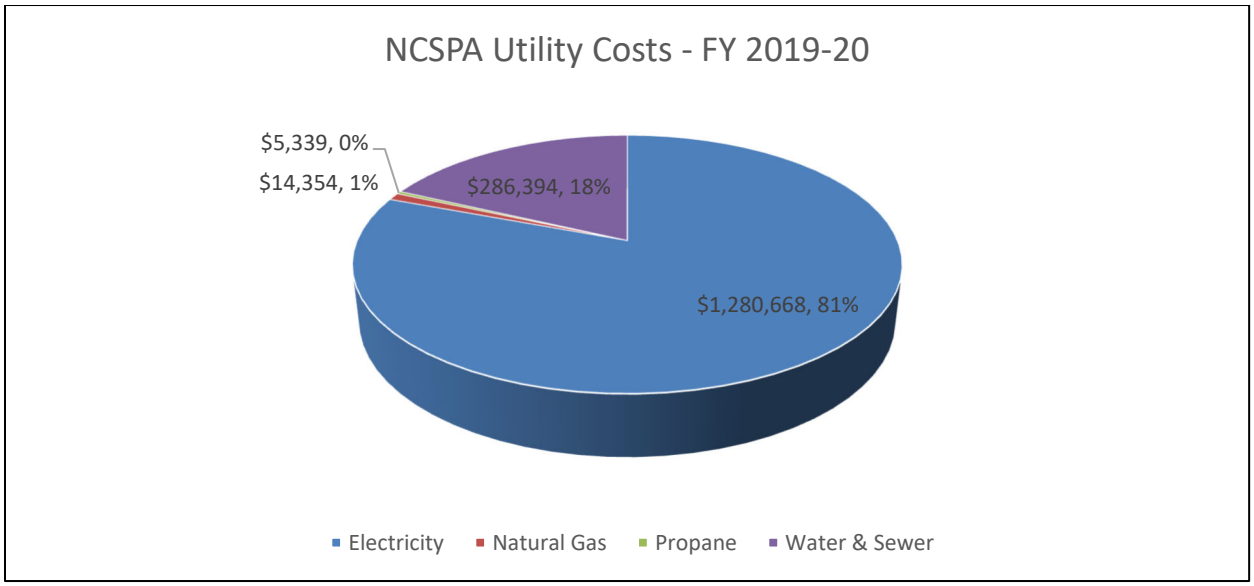


Figure 8 – NCSPA Total Utility Costs Per Fiscal Year

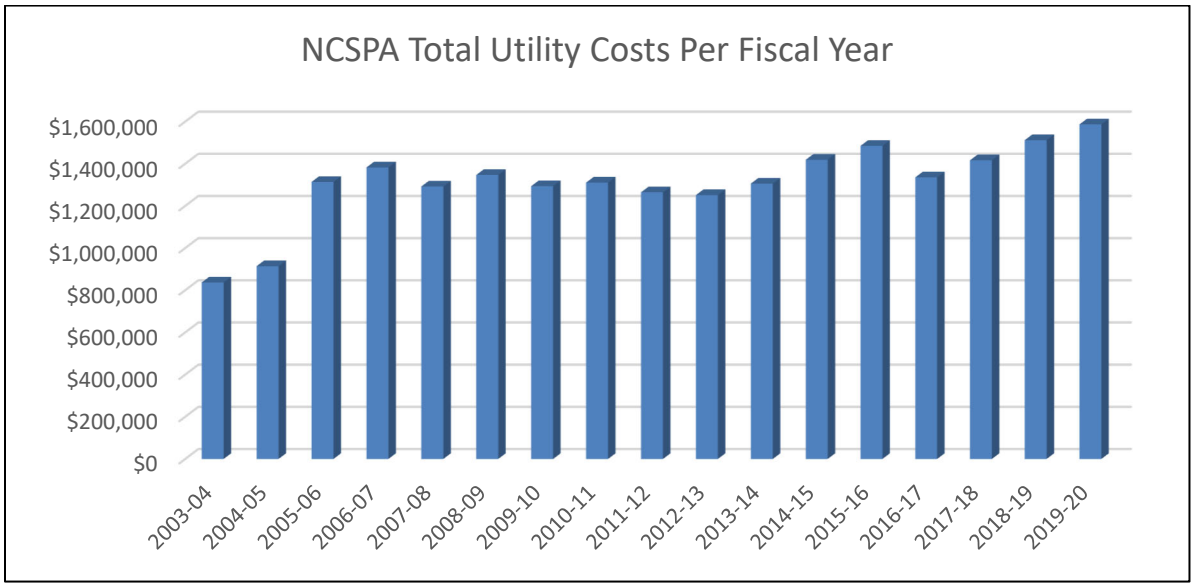


Figure 9 – DOT + NCSPA Utility Costs for FY 2019-20

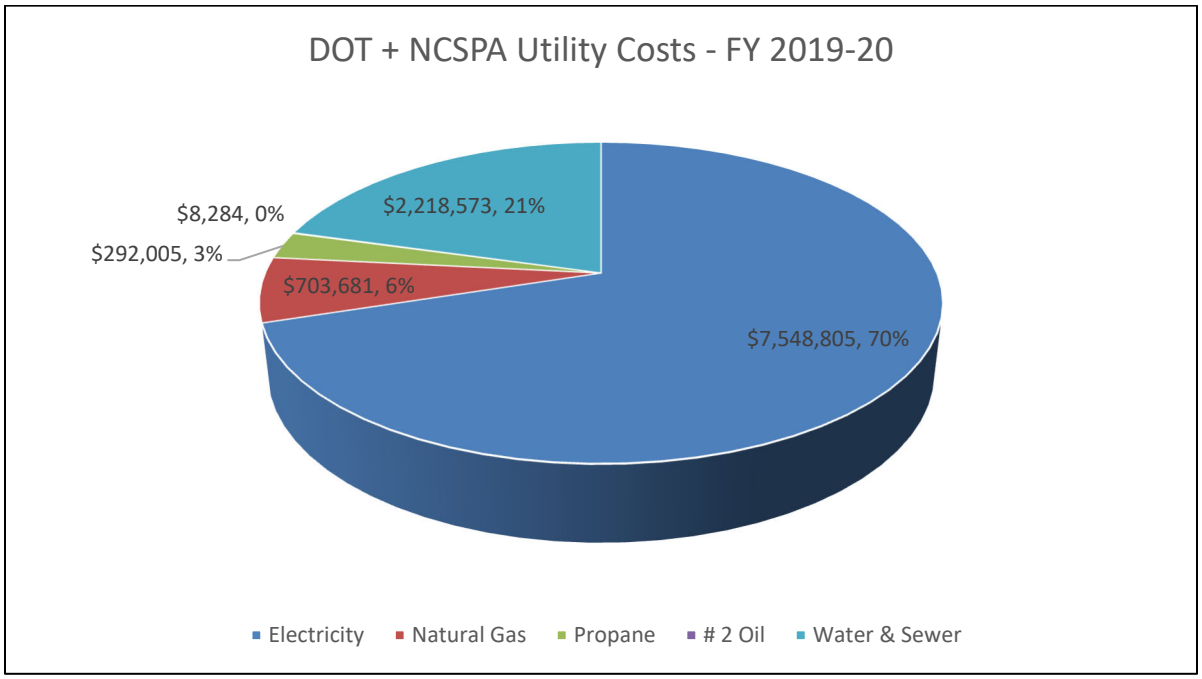


Figure 10 – DOT + NCSPA Utility Costs Per Year

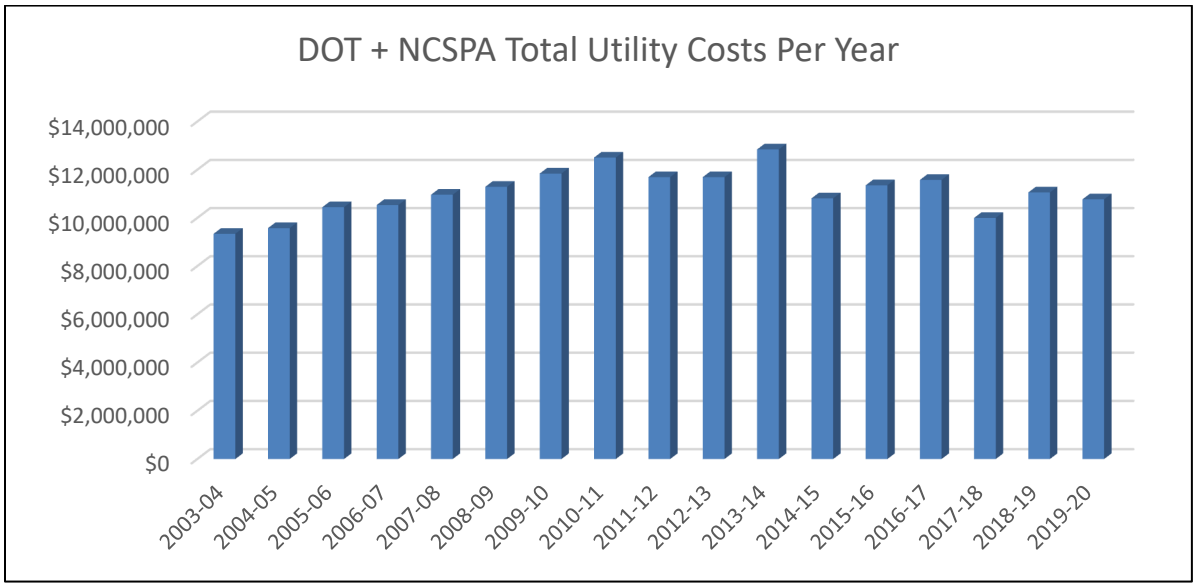


Table 2 – DOT + NCSPA Total Utility Costs and Savings Per Year

Fiscal Year	Total Utility Cost	Total Energy Cost	Total BTU	Total Savings / Cost Avoidance
2003-04	$9,341,426	$7,968,465	468,194,525,603	$0
2004-05	$9,575,686	$8,252,231	440,432,559,838	$681,870
2005-06	$10,445,101	$9,102,939	442,095,953,042	$948,020
2006-07	$10,534,967	$9,151,251	435,071,335,280	$1,289,426
2007-08	$10,962,336	$9,426,863	421,516,401,078	$1,975,965
2008-09	$11,293,419	$9,773,003	441,776,595,730	$1,567,344
2009-10	$11,841,312	$10,197,596	451,010,172,592	$1,939,150
2010-11	$12,505,316	$10,349,287	463,559,419,547	$2,572,585
2011-12	$11,693,641	$9,543,376	406,075,671,419	$4,065,367
2012-13	$11,693,575	$9,725,755	422,504,327,079	$2,139,048
2013-14	$12,842,594	$10,663,448	454,034,725,899	$1,258,751
2014-15	$10,811,735	$8,815,598	388,128,689,644	$4,470,425
2015-16	$11,354,444	$9,316,551	405,665,608,567	$3,567,365
2016-17	$11,576,783	$9,213,902	394,589,016,967	$3,227,339
2017-18	$10,000,673	$8,415,292	378,824,523,811	$4,888,300
2018-19	$11,056,122	$9,447,950	385,933,161,556	$3,027,378
2019-20	$10,771,348	$8,552,775	369,093,657,350	$3,188,775

Table 3 – DOT + NCSPA Utility Energy Usage Per Year

Fiscal Year	Elect - kWh	NG - therms	#2 oil - gals	Propane - gals	Water - kgal
2003-04	86,652,990	1,111,591	10,081	533,782	261,994
2004-05	85,256,357	885,493	12,200	561,665	242,988
2005-06	89,688,007	835,562	4,802	491,151	221,089
2006-07	89,396,867	772,125	3,275	475,535	206,793
2007-08	85,876,819	821,193	37,180	449,864	204,064
2008-09	86,587,839	907,786	58,725	517,370	211,582
2009-10	85,337,729	993,424	59,069	570,699	174,478
2010-11	89,730,765	999,185	70,528	520,451	153,404
2011-12	89,022,044	684,572	25,353	331,259	153,048
2012-13	82,430,157	970,481	25,358	443,958	218,086
2013-14	87,254,878	1,082,185	42,896	459,951	275,758
2014-15	75,191,176	842,193	31,990	468,320	148,538
2015-16	79,198,293	774,510	29,863	587,559	181,319
2016-17	76,128,423	764,352	26,747	596,787	250,203
2017-18	68,714,683	1,040,101	30,436	394,323	141,420
2018-19	75,545,860	933,992	12,389	360,656	150,182
2019-20	73,012,385	924,707	2910	295,710	260,682

Table 4 – Roadway Lighting Energy Savings Performance Contract Project - Costs and Energy Savings

Schedule N

Guaranteed Cash Flow Analysis

Total Financed Costs:	$ 33,454,594		
Finance Term Years:	15		
Annual Interest Rate:	2.75%		
Construction Months:	16		
First Year Payment:	$ 2,793,285		
Principal	$ 34,596,945	including construction period interest	
Interest	$ 7,725,119		

Escalation Rate by Utility/Fuel

Electric:	0%
Natural Gas:	0%
Steam:	
Water:	0%
Other (specify):	
Escalation Rate for Annual Fees (Avg):	2.38%

Yr.	Guaranteed Electric Dollar Savings	Guaranteed Electrical Dollar Savings from Control System	Other Guaranteed purchased Fuel Dollar Savings	Guaranteed Water Dollar Savings	-	Guaranteed Operational Dollar Savings	Total Guaranteed Dollar Savings (a)	Annual Service Fees (b)	Financing Cost (P&I) (c)	Net Savings (= a-b-c)
0	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
1	$ 1,202,563	$ 156,718	$ -	$ -	$ -	$ 1,824,648	$ 3,183,929	$ 390,644	$ 2,793,285	$ -
2	$ 1,202,563	$ 142,297	$ -	$ -	$ -	$ 1,864,243	$ 3,209,104	$ 455,354	$ 2,753,750	$ -
3	$ 1,202,563	$ 130,047	$ -	$ -	$ -	$ 1,899,065	$ 3,231,675	$ 465,740	$ 2,765,935	$ -
4	$ 1,202,563	$ 118,913	$ -	$ -	$ -	$ 1,934,595	$ 3,256,071	$ 476,465	$ 2,779,606	$ -
5	$ 1,202,563	$ 108,492	$ -	$ -	$ -	$ 1,970,846	$ 3,281,902	$ 487,541	$ 2,794,361	$ -
6	$ 1,202,563	$ 98,576	$ -	$ -	$ -	$ 2,009,372	$ 3,310,511	$ 514,365	$ 2,796,146	$ -
7	$ 1,202,563	$ 89,043	$ -	$ -	$ -	$ 2,046,039	$ 3,337,645	$ 526,489	$ 2,811,156	$ -
8	$ 1,202,563	$ 79,815	$ -	$ -	$ -	$ 2,084,555	$ 3,366,933	$ 539,009	$ 2,827,923	$ -
9	$ 1,202,563	$ 70,837	$ -	$ -	$ -	$ 2,122,225	$ 3,395,624	$ 535,614	$ 2,860,010	$ -
10	$ 1,202,563	$ 62,068	$ -	$ -	$ -	$ 2,162,292	$ 3,426,923	$ 548,642	$ 2,878,281	$ -
11	$ 1,202,563	$ 53,481	$ -	$ -	$ -	$ 2,210,637	$ 3,466,680	$ 636,702	$ 2,829,978	$ -
12	$ 1,202,563	$ 45,051	$ -	$ -	$ -	$ 2,250,095	$ 3,497,709	$ 652,104	$ 2,845,605	$ -
13	$ 1,202,563	$ 36,760	$ -	$ -	$ -	$ 2,292,095	$ 3,531,418	$ 685,670	$ 2,845,748	$ -
14	$ 1,202,563	$ 28,596	$ -	$ -	$ -	$ 2,333,153	$ 3,564,312	$ 702,431	$ 2,861,881	$ -
15	$ 1,202,563	$ 20,545	$ -	$ -	$ -	$ 2,375,019	$ 3,598,127	$ 719,728	$ 2,878,399	$ -
Total	**$ 18,038,442**	**$ 1,241,240**	**$ -**	**$ -**	**$ -**	**$ 31,378,878**	**$ 50,658,561**	**$ 8,336,497**	**$ 42,322,064**	**$ -**

NOTES:

1) Annual Net Savings must never be negative.
2) A surplus in one year cannot be carried forward to create positive cash flow in a subsequent year.
3) "Annual Service Fees (b)" includes Owner 3rd party review fee of + ESCO M&V + Service fees
4) Guaranteed savings values will be verified per calculation methods in Schedule F.
5) Interest rate as provided by ISSUER to ESCO. Payments are calculated monthly in arrears.
6) Electric and Operating savings will all be combinned and guaranteed annually as a total savings amount and not individually.
7) Construction Period Interest is capitalized for calculation of Financing Costs (P&I)

Table 5 – Building Energy Savings Performance Contract – Costs and Energy Savings

Yr.	Guaranteed Electric Dollar Savings	Guaranteed Natural Gas Dollar Savings	Guaranteed DOA Steam and Chilled Water Dollar Savings	Guaranteed Water Dollar Savings	Other Please Specify	Guaranteed Operational Dollar Savings	Guaranteed Dollar Savings (a)	Annual Service Fees (b)	**Financing Cost (P&L) (c)	**Net Savings = a-b-c
0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$162,321	$ 598,169	$ 27,760	$ 570,408	$ 1
2	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$161,670	$ 597,518	$ 28,315	$ 569,200	$ 3
3	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$161,005	$ 596,854	$ 28,882	$ 567,972	$ 0
4	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$160,328	$ 596,176	$ 29,459	$ 566,716	$ 1
5	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$159,637	$ 595,485	$ 30,048	$ 565,436	$ 1
6	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$158,932	$ 594,780	$ 30,649	$ 564,128	$ 3
7	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$158,213	$ 594,061	$ 31,262	$ 562,796	$ 3
8	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$157,479	$ 593,328	$ 31,888	$ 561,440	$ 0
9	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$156,731	$ 592,580	$ 32,525	$ 560,052	$ 2
10	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$155,968	$ 591,817	$ 33,176	$ 558,640	$ 1
11	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$155,190	$ 591,038	$ 33,839	$ 557,196	$ 3
12	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$154,396	$ 590,244	$ 34,516	$ 555,728	$ 0
13	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$153,586	$ 589,435	$ 35,206	$ 554,228	$ 0
14	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$152,760	$ 588,609	$ 35,911	$ 552,696	$ 2
15	$ 308,979	$ (48,616)	$ 175,485	$ -	$ -	$151,918	$ 587,766	$ 36,629	$ 524,581	$ 26,556
Total	**$ 4,634,691**	**$ (729,240)**	**$ 2,632,275**	**$ -**	**$ -**	**$ 2,360,134**	**$ 8,897,860**	**$ 480,065**	**$ 8,391,217**	**$ 26,578**

Appendix A

NCDOT Agency Utility Management Plan

2019-21

Focus Area 1: Comprehensive Plan	
Strategy 1.	Designate Energy Manager as the point of contact for SEO
Strategy 2.	Edit or create a plan to reflect energy efficiency strategy toward 40% reduction in Btu/gsf and EO-80 goals.
Strategy 3.	Contact the SEO to assist with review of strategy, budget, training, and timeline.
Strategy 4.	Develop internal stakeholders to develop behavioral programming and internal team building toward goals
Strategy 5.	Implement Plan

2019-2021 Planned Activities	**Expected Measurement**	**Assigned To**	**Occurrence**
Meet with SEO to develop ideas for plan	Discuss training schedule available, current Utility Management Plan and future Management Plan	Energy Manager and SEO staff	Quarterly
Research facilities for potential energy savings projects	Create a list to use for potential projects to be implemented in the Utility Management Plan	Energy Manager and Agency Staff	Quarterly
Create a Utility Management Plan	Complete timeline and approvals from agency and submit plan to SEO	Energy Manager, Agency Staff, and NCDOT Climate Change Workgroup	Due March 1, 2019, thereafter October 1st each year
Attend SEO or other energy conservation training sessions	Discuss lessons learned with staff and how that can enhance your strategy	Agency staff	As available
Develop internal stakeholders and internal teams to implement plan	Designate a person or team to implement portions on the plan	Energy Manager, Agency staff, and NCDOT Climate Change Workgroup	May, 2019

2019-2021 Planned Activities	Expected Measurement	Assigned To	Occurrence
Develop internal marketing and awards/rewards program	Designate person to develop programming and implement program	Energy Manager, Agency Staff, and NCDOT Climate Change Workgroup	May, 2019
Review Utility Management Plan progress	Tweak plan if it is not realizing expected savings	Energy Manager, and NCDOT Climate Change Workgroup	Quarterly
Track and analyze utility data	Record monthly utility data for annual utility report to submit to SEO and trend to catch anomalies early on	Energy Manager	Monthly, September 1st each year
Performance Contracts	Verifying guaranteed energy savings are achieved, and execute contractual requirements	Energy Manager and Agency Staff	Monthly monitoring and annual energy savings verification.
Energy Efficiency Incentives	Partner with utility providers to utilize energy efficiency incentive programs to reduce the cost of NCDOT projects - both vertical and horizontal.	Energy Manager and Agency Staff	Evaluate by project.
Building Energy Efficiency Design and Workspace Standards	Implement most recent NC State Energy Code and additional energy efficiency / sustainability design standards, SPO workspace standards, and other best practices for new and renovated buildings.	Energy Manager and Agency Staff	Update quarterly.
Partner with DEQ / State Energy Office and other agencies on energy savings projects	Coordinated with DEQ and other agencies.	Energy Manager and Agency Staff	As available
Training	To promote preventative maintenance of new and existing systems to maintain expected energy savings.	Energy Manager and Agency Staff	As contractually required.
Education	To inform and promote energy savings	Energy Manager and Agency Staff	TBD

2019-2021

Focus Area 2: Projects to Implement	
Strategy 1.	Review projects with staff to determine high priority projects to implement
Strategy 2.	Work with staff to determine the best timeframe to implement projects
Strategy 3.	Create a schedule for projects to be implement during the fiscal year
Strategy 4.	Communicate projects to staff
Strategy 5.	Implement projects

Planned Activities	Expected Measurement	Assigned To	Occurrence
Building Energy Performance Contract	Annual energy savings	Energy Manager and Agency Staff	Ongoing
Roadway Lighting Energy Performance Contract	Completion of construction work by 3/31, annual energy savings, and compliance with contractual maintenance requirements.	Energy Manager and Agency Staff	Ongoing
Energy Efficiency Incentives	Funds received per project	Energy Manager and Agency Staff	Ongoing
Analyze and track uility accounts to reduce costs and identify problems to correct	Funds saved	Energy Manage and Agency Staff	Ongoing
Investigate options for tracking utility data	Determine the best method to track utility data	Energy Manager and Agency Staff	Ongoing
Energy Audits and Corrective Measures	Identification of buildings that show excessive energy usage; determine cause and implement corrective actions.	Energy Manager, DEQ, and Agency Staff	TBD
Building energy efficiency design and SPO workplace standard	Update annually	Energy Manager and Agency Staff	Annually
Develop priority list of projects for 2020-21	Develop list of projects and start to schedule implementation for next fiscal year	Energy Manager and staff	June 30, 2020

NC Department of Transportation

Agency Utility Management Plan Declaration

- The NC Department of Transportation recognizes that energy and water consumption can be managed for the benefit of our agency. Energy and Water management is the responsibility of the staff at each facility, guided and supported by the NCDOT Energy Management Engineer.
- The Department of Transportation has implemented an Agency Utility Management Plan for NCDOT-owned facilities. The Director of Facilities Management Division is responsible for the success of the program in NCDOT facilities.
- The attached plan outlines the activities and expenditures required to reduce energy and water consumption in NCDOT-owned facilities to achieve the goals of the program.
- The Department Secretary's staff will review progress and results, and will support staff attendance at training in energy and water management.

Agency Utility Management Plan Goals

As required in Executive Order 80, NCDOT will support efforts to reduce by 2025 total energy consumption per square foot in state owned buildings by at least 40% below fiscal year 2002-2003 levels, and implement energy efficiency best practices and programs in support of these goals.

Agency Utility Management Plan – Measures

Our tracking measures will be the following Key Performance Indicators:

Total Energy Use per Square Foot
Total Energy Cost per Square Foot
Total Water Use per Square Foot
Total Water Cost per Square Foot

Strategic Energy and Water Plan Mandate – Commitment

I have read the Agency Utility Management Plan for the NC Department of Transportation. The plan, as presented, supports the reduction required in Executive Order 80.

Updated this 1 st day of March 2021.

J. E. Boyette
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Eric R. Frazier
Energy Management Engineer

Michael Mantzouranis
Director, Facilities Management Division

Department Secretary